

Applicants : Philip O. Livingston and Friedhelm Helling  
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- 97. (New) A composition which comprises:  
a) a conjugate of i) a GM2 or GD2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising a sphingosine base, to ii) Keyhole Limpet Hemocyanin or a derivative thereof comprising an  $\epsilon$ -aminolysyl group;  
b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and  
c) a pharmaceutically acceptable carrier;  
the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in a subject,  
wherein in the conjugate the ganglioside derivative is conjugated to Keyhole Limpet Hemocyanin or the derivative thereof through a C-4 carbon of the sphingosine base of the ceramide portion of the ganglioside derivative to the  $\epsilon$ -aminolysyl group of Keyhole Limpet Hemocyanin or the derivative thereof.--
- 98. (New) The composition of claim 97, wherein the ganglioside derivative is a derivative of GM2.--
- 99. (New) The composition of claim 97, wherein the ganglioside derivative is a derivative of GD2.--
- 100. (New) The composition of claim 97, wherein the ganglioside derivative is conjugated to Keyhole Limpet Hemocyanin.--
- 101. (New) The composition of claim 97, wherein the saponin is QS-21.--

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- 102. (New) The composition of claim 97, wherein the amount of the conjugate is an amount between about 1  $\mu\text{g}$  and about 200  $\mu\text{g}$ .--
- 103. (New) The composition of claim 102, wherein the amount of the conjugate is an amount between about 50  $\mu\text{g}$  and about 90  $\mu\text{g}$ .--
- 104. (New) The composition of claim 103, wherein the amount of the conjugate is about 70  $\mu\text{g}$ .--
- 105. (New) The composition of claim 102, wherein the amount of the conjugate is an amount between about 1  $\mu\text{g}$  and about 10  $\mu\text{g}$ .--
- 106. (New) The composition of claim 105, wherein the amount of the conjugate is about 7  $\mu\text{g}$ .--
- 107. (New) The composition of claim 97, wherein the amount of the saponin is an amount between about 10  $\mu\text{g}$  and about 200  $\mu\text{g}$ .--
- 108. (New) The composition of claim 107, wherein the amount of the saponin is about 100  $\mu\text{g}$ .--
- 109. (New) The composition of claim 107, wherein the amount of the saponin is about 200  $\mu\text{g}$ .--
- 110. (New) The composition of claim 97, wherein the molar ratio of the ganglioside derivative to Keyhole Limpet Hemocyanin or the derivative thereof is between about 200 and about 1400.---

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--111. (New) A method of stimulating or enhancing antibody production in a subject which comprises administering to the subject an effective amount of a composition which comprises:

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- a) a conjugate of i) a GM2 or GD2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising a sphingosine base, to ii) Keyhole Limpet Hemocyanin or a derivative thereof comprising an  $\epsilon$ -aminolysyl group;
  - b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and
  - c) a pharmaceutically acceptable carrier;

the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in the subject, wherein in the conjugate the ganglioside derivative is conjugated to Keyhole Limpet Hemocyanin or the derivative thereof through a C-4 carbon of the sphingosine base of the ceramide portion of the ganglioside derivative to the  $\epsilon$ -aminolysyl group of Keyhole Limpet Hemocyanin or the derivative thereof, so as to thereby stimulate or enhance antibody production in the subject.--

--112. (New) A method of preventing relapse of a cancer in a subject which comprises administering to the subject an effective cancer relapse preventing amount of a composition which comprises:

- a) a conjugate of i) a GM2 or GD2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising a sphingosine base, to ii) Keyhole Limpet Hemocyanin or a derivative thereof

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comprising an e-aminolysyl group;  
b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and  
c) a pharmaceutically acceptable carrier;  
the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in a subject,  
wherein in the conjugate the ganglioside derivative is conjugated to Keyhole Limpet Hemocyanin or the derivative thereof through a C-4 carbon of the sphingosine base of the ceramide portion of the ganglioside derivative to the e-aminolysyl group of Keyhole Limpet Hemocyanin or the derivative thereof, so as to thereby prevent relapse of a cancer in the subject.--

--113. (New) A method of preventing or treating a cancer in a subject which comprises administering to the subject an effective cancer preventing or treating amount of a composition which comprises:

a) a conjugate of i) a GM2 or GD2 ganglioside derivative which comprises an unaltered oligosaccharide part and an altered ceramide portion comprising a sphingosine base, to ii) Keyhole Limpet Hemocyanin or a derivative thereof comprising an e-aminolysyl group;  
b) a saponin derivable from the bark of a Quillaja saponaria Molina tree; and  
c) a pharmaceutically acceptable carrier;  
the relative amounts of such conjugate and such saponin being effective to stimulate or enhance antibody production in the subject,  
wherein in the conjugate the ganglioside derivative is conjugated to Keyhole Limpet Hemocyanin or the derivative

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thereof through a C-4 carbon of the sphingosine base of the ceramide portion of the ganglioside derivative to the e-aminolysyl group of Keyhole Limpet Hemocyanin or the derivative thereof, so as to thereby prevent or treat a cancer in the subject.--

--114. (New) The method of claim 112 or 113, wherein the cancer is of epithelial origin.--

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--115. (New) The method of claim 112 or 113, wherein the cancer is of neuroectodermal origin.--

--116. (New) The method of claim 115, wherein the cancer of neuroectodermal origin is a melanoma.--

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--117. (New) The method of any one of claims 111-113, wherein the administering is effected at two or more sites.--

--118. (New) The method of claim 117, wherein the administering is effected at three sites.--

**Remarks:**

Claims 69-96 were pending in the subject application. Applicants have hereinabove canceled claims 69-96 without prejudice or disclaimer to their right to pursue the subject matter of these claims in a later-filed application. Applicants have hereinabove added new claims 97-118. Support for these claims may be found inter alia in the specification as follows: claim 97: page 11, lines 13-15, page 32, lines 1-20, page 76, lines 19-21; claims 98-99: page 12, lines 28-31; claim 100: page 13, lines 1-2; claim 101: